REMARKS

Claims 1 to 6 are pending. Claims 1 to 6 are rejected.

Claim 1 was rejected under 35 U.S.C. § 112, second paragraph. The Action states, "Claim 1 recites ... 'a method for determining..." in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 is amended so that the recitation of "the plurality of fixing marks" in line 7 is consistent throughout the claim. Withdrawal of the rejection under § 112 is respectfully requested.

The claims were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The Action alleges that claim 1, "would not appear to be sufficient to constitute a tangible result, since the outcome of [steps (a) to (c)] has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized."

The specification does disclose use of the outcome of steps (a) to (c) in a practical application. As set forth in paragraph [0001]

> [0001] The present invention relates to a method for positioning a measuring device emitting and receiving optical radiation for measuring wear in the lining of a container, said method comprising fixing the coordinate systems set for the measuring device and the container, said fixing comprising mathematically combining the coordinate systems of the measuring devices and container by measuring the position of specific fixing points in the coordinate system of the measuring device.

By measuring the position of the fixing points in the coordinate system of the measuring device, the position of the measuring device is determined. The measuring device can then be used for measuring wear in the lining of a container. Paragraph [0002] further explains an example of measuring wear in the lining of converters of ladles used in steel making, and explains that, "Wear linings of converters must be renewed." Thus, the position of the measuring device is determined in order to measure wear in the lining. The wear in the lining is in turn

measured in order to determine how to renew the lining (e.g., where to apply additional material to the lining). This is a practical application of the result disclosed within the application.

Also, claim 1 is amended to specify that, "the wear in the lining of the container (10) in the coordinate system (36) of the container (10) is determined, and (d) outputting the wear in the lining for use in renewing the lining". Thus, the outcome of steps (a) to (c) is made available in such a manner that its usefulness in a disclosed practical application can be realized. Further, renewing the lining is a physical transformation.

Support for the amendment to claim 1 is provided by paragraphs [0001] through [0003]. As stated in M.P.E.P. §2163.06, "[I]nformation contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter." Further M.P.E.P. §2164.01 states, "Any part of the specification can support an enabling disclosure, even a background section that discusses, or even disparages, the subject matter disclosed therein." Thus, the amendment to claim 1 is supported by the original disclosure, and no new matter is added.

Withdrawal of the rejection under § 101 is respectfully requested.

Claims 1 and 4-6 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. 5,570,185 (Jokinen et al.). This rejection is respectfully traversed.

Claim 1 recites, "determining the position of the center and at least two linear edges thereof and creating a first temporary coordinate system (47) based on the position of the center and the directions of the at least two edges thereof." Thus, the claim language expressly requires determining the position of at least two linear edges, such that the temporary coordinate system is based in part on the directions of the at least two edges. Determining the positions of at least two linear edges and their directions provides sufficient additional information to enable creation of the first temporary coordinate system.

The Action alleges that lines 20 and 21 are linear edges of the fixing marks. However, lines 20 and 21 are not parts of the fixing marks at all. Rather, lines 20 and 21 are imaginary lines along which the laser beam travels (See col. 5, lines 9-14 and FIG. 6(a)). The fixing mark P1 is circular, and does not have linear edges.

Further, as shown in FIGS. A and B below, the claimed method is different from that of Jokinen et al. The claimed method determines the direction of at least two linear edges by deflecting beams in first and second intersecting directions. One of ordinary skill understands

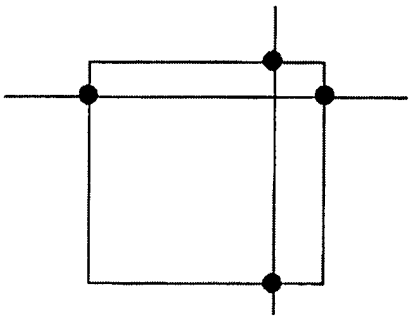


FIG. A

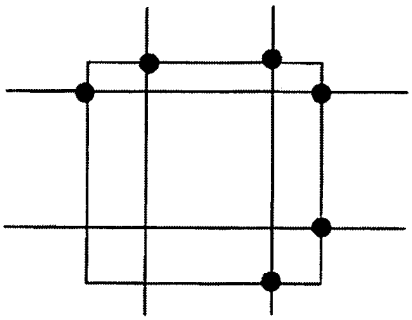


FIG. B

that, as claimed and as shown in FIG. B above, determination of at least two edges requires at least deflecting the beam across the first fixing mark at two points on each of the two edges to determine the directions of those two edges. At least two points are needed to define a direction. If the beam is only deflected once across each of the two edges (i.e., crossing each edge at only one point as shown in FIG. A, above), then the direction of the two edges cannot be determined. For example, in FIG. A, with only one crossing by each of the intersecting lines, the direction of the edges cannot be determined. Based on the two beam crossings shown in FIG. 6(a) of Jokinen, one could not even tell a linear edge from a circular edge, or determine a direction of the edge at any point. For example, FIG. C below shows that, given only the two scan lines and four points taught by FIG. 6A of Jokinen, the direction of the edges cannot be determined, and it is not possible to determine whether the target is a circle or square or other shape.

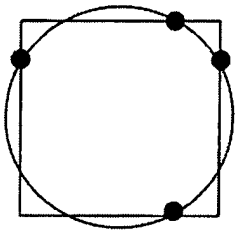


FIG. C

Further, Jokinen does not disclose or suggest " creating a first temporary coordinate system (47) based on the position of the center and the directions of the at least two edges thereof." Jokinen does not determine the direction of the edges, and thus cannot create a temporary coordinate system based in part on the directions of the edges. Jokinen explains how to determine the position of the center. The only discussion of "direction" in Jokinen is in relation to the direction of deflection of the laser beam. Jokinen is concerned with finding the center point of each of three targets. Jokinen uses the center points of three fixing marks in order to create the temporary coordinate system. The location of the center of only the first fixing mark in Jokinen is not enough information to define the temporary coordinate system. Jokinen does not disclose or suggest finding the direction of at least two edges as claimed in claim 1, which obviates the need to locate two more targets in order to define the temporary coordinate system.

Therefore, claims 1, and 4-6 are not subject to rejection as anticipated by Jokinen.

Claims 2 and 3 were rejected under § 103 as being unpatentable over Jokinen. Claims 2 and 3 are dependent on claim 1, and should be patentable for at least the reasons discussed above with reference to claim 1. Nothing in Jokinen discloses nor suggests determining directions of at least two edges, nor creating a temporary coordinate system based on the position of the center and the directions of the at least two edges. Nor would it have been obvious to do so, since nothing in Jokinen would have suggested to one of ordinary skill how to determine a direction of an edge of a circular target as shown by Jokinen.

Further, claims 2 and 3 include additional features that are separately patentable. The Action alleges that it would have been obvious to merely substitute rectangular fixing marks or a larger first fixing mark for those taught by Jokinen. The Action alleges that the rectangular target accomplishes the same result as the circular target of Jokinen. However, Jokinen relies on finding the centers of three fixing marks to define three points for defining the coordinate system. There would have been no apparent reason to determine additional information from the three fixing marks of Jokinen, and thus no motivation to use rectangular fixing marks (as in claim 2) defining linear edges.

Further, having a larger first fixing mark allows the points on the edges that are crossed by the laser to be spaced further apart, improving the accuracy of the edge direction

determination for the first fixing mark, which is used to define the temporary coordinate system. Jokinen would not have motivated one of ordinary skill in the art to have used a first fixing mark larger than the second and third fixing mark. If a larger fixing mark was desired for Jokinen's method, that larger size would have been desired for all three fixing marks. Jokinen neither discloses nor suggests the separate role of using the first fixing mark to define the temporary coordinate system.

Therefore, claims 2 and 3 are not subject to rejection under 35 U.S.C. § 103, and should be patentable as well.

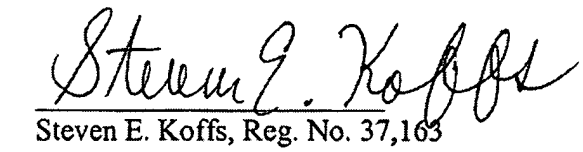
Conclusion

In view of the foregoing amendments and remarks, Applicant submits that this application is in condition for allowance. Early notification to that effect is respectfully requested.

The Assistant Commissioner for Patents is hereby authorized to charge any additional fees or credit any excess payment that may be associated with this communication to deposit account **04-1679.**

Respectfully submitted,

Dated: May 29, 2008



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